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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,018	01/05/2007	Yukihiko Asa	SAWA0007	9943
22862 7590 08/20/2009 GLENN PATENT GROUP 3475 EDISON WAY, SUITE L MENLO PARK, CA 94025				
EXAMINER				
PATIDAR, JAY M				
ART UNIT		PAPER NUMBER		
2858				
NOTIFICATION DATE		DELIVERY MODE		
08/20/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptomatters@glenn-law.com  
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### Office Action Summary

**Application No.**

10/566,018

**Applicant(s)**

ASA, YUKIHIRO

**Examiner**

JAY M. PATIDAR

**Art Unit**

2858

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 July 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5 and 6 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- \_\_\_\_\_ Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)
- \_\_\_\_\_ Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

1. This communication is in response to applicant's amendment filed on July 15, 2009.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3,5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 44-14970 in view of Sato (6,563,306) or Wakiyama et al. (2004/0075426) and Wolf et al. (4,970,463).

As to claims 1, '970 disclose a magnetic material detection device wherein a magnet 3 is displaceable in the direction of magnetic poles (see fig. 3) and detecting means 2 e.g. reed switch for detecting displacement of the magnet 3 wherein the magnetic material detection device detects that a magnetic material 10 located outside the magnetic material detection device body 1 is located within a predetermined distance from the magnetic material detection device body. '970 does not show the Hall switch and boundary of poles of the magnet crosses the operating point of the detection means (i.e. Hall sensor) after

displacement or a second magnet. Sato or Wakiyama and Wolf are cited to show these features. Sato and Wakiyama are cited to show that hall sensor is nothing but a hall switch and teach to use a Hall element with a moving magnet (figs. 1-2). The boundary of the magnet poles crosses the operating point as shown in fig. 2. It is well known in the magnetic field related art to use a Hall element for detecting the moving magnet. The movement of the magnet alters the magnetic field density on the Hall sensing element. The on-off state is nothing but the properties of the combination of the magnet and Hall element device. Wakiyama shows this property in figs. 1 and 3. Sato shows such property in figs. 1 and 2. Wolf shows at col. 4, lines 33-43 that reed switch and hall switch or sensors are equivalent sensing devices. It would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute hall sensor in place of reed switch in '970, since the examiner takes Official Notice of the equivalence of hall sensor and reed switch for their use in the magnetic field sensing art (art recognized equivalent) and the selection of any of these known equivalents to sense magnetic field are commonplace among artisans (that is their interchangeability) and would be within the level of ordinary skill in the art. Hall element and reed switch being routinely substituted for one another. Consequently, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of '970 to have included

a hall element as taught by Wolf and use the hall-magnet arrangement as taught by Sato or Wakiyama to detect the relative position of the magnet.

As to claim 2, '970 shows returning means 4 for returning the magnet to its original position (figs. 1-3).

As to claim 3, '970 does not explicitly show a plate spring. However, '970 discloses a magnet returning means 4 for returning the magnet to the original position whose one end is connected to the magnet side and the other end is connected to the device body or housing 1 (note figs. 1-3, near 13). The use of either the plate spring or a coil spring for returning the magnet to its original position involves only routine skill in the art.

As to claim 5, the magnet 3 in '970 or in Sato or Wakiyama (fig. 1) is a cylinder or rectangular shaped magnet (note figs. 1-3).

As to claim 6, the external object 10 in '970 is a magnetic material (see abstract). The use of such device for a mobile object is merely an intended use of the old device.

3. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. Claim 7 is allowed.

5. Applicant's arguments with respect to rejected claims have been considered but are moot in view of the new ground(s) of rejection.

6. Applicant's arguments filed on July 15, 2009 have been fully considered but they are not persuasive. Applicant argues regarding on-off state of hall sensing element. Examiner respectfully disagrees. The on-off state of the hall element is nothing but the fundamental property of the hall switch-magnet arrangement as explained above. Furthermore, as can be seen in figs. 1 and 3 of Wakiyama, the output signal of hall is shown in fig. 3 as "a" thereof wherein it shows when the boundary line of the magnet poles crosses the operating point, the on-off state of the hall element changes. Applicant also argues about the hall switch and magnet arrangement. As explained above, the hall element is an art-recognized equivalent to the reed switch.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Note PTO-892 for on-off state of the hall switch.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAY M. PATIDAR whose telephone number is (571)272-2265. The examiner can normally be reached on M-Thur 8:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Assoud can be reached on 571-272-2210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jay M. Patidar/  
Primary Examiner  
Art Unit 2858